

Title (en)
GENES FROM ACTINOBACILLUS SUCCINOGENES 130Z (ATCC 55618) FOR PRODUCTION OF CHEMICALS FROM THE A. SUCCINOGENES C4-PATHWAY

Title (de)
GENE AUS ACTINOBACILLUS SUCCINOGENES 130Z (ATCC 55618) ZUR HERSTELLUNG VON CHEMIKALIEN AUS DEM A. SUCCINOGENES-C4-WEG

Title (fr)
GENES ISSUS DE D'ACTINOBACILLUS SUCCINOGENES 130Z (ATCC 55618) POUR LA PRODUCTION D'AGENTS CHIMIQUES ISSUS DE LA VOIE C4 D'A. SUCCINOGENES

Publication
EP 1922405 A4 20090401 (EN)

Application
EP 06800746 A 20060804

Priority
• US 2006030425 W 20060804
• US 70584105 P 20050805

Abstract (en)
[origin: WO2007019301A2] Actinobacillus succinogenes genes and methods of using the genes in genetically engineered A. succinogenes so as to improve production of chemicals such as succinate, fumarate, malate, 5-aminolevulinate, 2-oxoglutarate, glutamate, and aspartate. The genetically engineered A. succinogenes strains are capable of overexpressing C4 enzymes. The genetically engineered A. succinogenes can have one or more gene knockouts or modifications that inhibit C3 enzymes. The fluxes supplying substrate to the C4 pathway can also be improved in some of the genetically engineered A. succinogenes.

IPC 8 full level
A61K 39/02 (2006.01); **C12N 1/20** (2006.01)

CPC (source: EP KR)
A61K 39/02 (2013.01 - KR); **C07K 14/285** (2013.01 - EP); **C12N 1/20** (2013.01 - KR); **C12P 7/46** (2013.01 - EP); **C12P 7/50** (2013.01 - EP); **C12P 13/001** (2013.01 - EP); **C12P 13/14** (2013.01 - EP); **C12P 13/20** (2013.01 - EP)

Citation (search report)
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• [Y] CHOTANI G ET AL: "The commercial production of chemicals using pathway engineering", BIOCHIMICA ET BIOPHYSICA ACTA - PROTEIN STRUCTURE AND MOLECULAR ENZYMOLOGIE, ELSEVIER SCIENCE BV, AMSTERDAM, NL, vol. 1543, no. 2, 29 December 2000 (2000-12-29), pages 434 - 455, XP004279117, ISSN: 0167-4838
• [A] KIM P ET AL: "Effect of Overexpression of Actinobacillus succinogenes Phosphoenolpyruvate Carboxykinase on Succinate Production in Escherichia coli", APPLIED AND ENVIRONMENTAL MICROBIOLOGY, AMERICAN SOCIETY FOR MICROBIOLOGY, US, vol. 70, no. 2, 1 February 2004 (2004-02-01), pages 1238 - 1241, XP002999937, ISSN: 0099-2240
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Citation (examination)
DATABASE NCBI 3 November 2004 (2004-11-03), LAIVENIEKS ET AL.: "Actinobacillus succinogenes mdh gene cloning and recombinant enzyme", Database accession no. AY773261

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
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US 2006030425 W 20060804; BR PI0614716 A 20060804; CA 2618694 A 20060804; CN 200680036758 A 20060804; EP 06800746 A 20060804; KR 20087005227 A 20080303; MX 2008001716 A 20060804